This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. Canceled.

2. (Amended) A method to determine one or more shortest paths through a portion of a computer network from a source vertex to one or more destination vertices according to a link-state protocol, comprising:

processing a graph representation of the network portion, the graph representation including nodes and edges representing the vertices and connections therebetween, respectively

wherein

the processing includes operating on the graph representation according to a Dijkstra-like algorithm,

a subset of the Dijkstra-like algorithm processing includes candidate list processing, to maintain and operate upon a candidate list of nodes that have been visited in the Dijkstra-like algorithm processing, and

the candidate list processing is optimized relative to standard Djkstra algorithm processing for the link-state protocol;

~~The method of claim 1, wherein the candidate list processing includes:~~

maintaining the candidate list of nodes as a Fibonacci heap of Fibonacci nodes, wherein the Fibonacci heap of Fibonacci nodes is stored in a generic format that is independent of the link-state protocol; and

operating on the Fibonacci heap of Fibonacci nodes to determine one or more shortest paths by processing the Fibonacci heap of Fibonacci nodes according to a particular algorithm that is independent of the link-state protocol, wherein the operating on the Fibonacci heap is performed by a plurality of operators each of which is capable of operating on a plurality of link state protocols.

3. (Amended) The method of ~~claim 2~~claim 13, wherein the candidate list processing includes initially accepting a prior-created generic description of the Fibonacci heap of Fibonacci nodes that is independent of the particular link-state protocol.

4. (Amended) The method of claim 3, wherein initially accepting a prior-created generic description for the Fibonacci heap of Fibonacci nodes includes accepting the prior-created generic description via a generalized application programming interface, the application programming interface including interfaces for the plurality of operators.

5. (Amended) The method of ~~claim 2~~claim 13, wherein the step of processing the Fibonacci heap of Fibonacci nodes includes considering the Fibonacci nodes to determine which nodes to include in the one or more shortest paths.

6. (Amended) The method of ~~claim 2~~claim 13, wherein the step of processing the Fibonacci heap of Fibonacci nodes includes a relax-key operation performed in an iterative, non-recursive manner.

7. (Amended) The method of ~~claim 2~~claim 13, including:

initially allocating memory for a list of pointers to the Fibonacci nodes,

wherein the step of operating on the Fibonacci nodes includes maintaining the list of pointers to the Fibonacci nodes.

8. (Amended) The method of ~~claim 2~~claim 13

wherein the step of operating on the Fibonacci nodes includes accessing a comparison function associated with the Fibonacci heap in a manner that is independent of the particular link-state protocol.

9. Canceled.

10. (New) The method of claim 2, wherein the plurality of link state protocols includes one or more versions of Open Shortest Path First and one or more versions of IS-IS.

11. (New) The method of claim 10, wherein the plurality of operators includes an initialization operator, for initializing the candidate list on the Fibonacci heap, wherein the initialization operator is operable on each of the plurality of link state protocols.

12. (New) The method of claim 11, wherein the plurality of operators includes an insertion operator, for inserting a new node in the candidate list, wherein the new node may corresponds to any of the plurality of link state protocols.

13. (New) The method of claim 12, wherein the plurality of operators includes an extract minimum operator, for extracting a node from the candidate list of nodes that has a minimum cost according to the Dijkstra-like algorithm, wherein the extract minimum operator is operable for any of the plurality of link state protocols.

14. (New) The method of claim 13, wherein the minimum cost operator may be configured to provide different results contingent upon the protocol in use from the plurality of link state protocols.